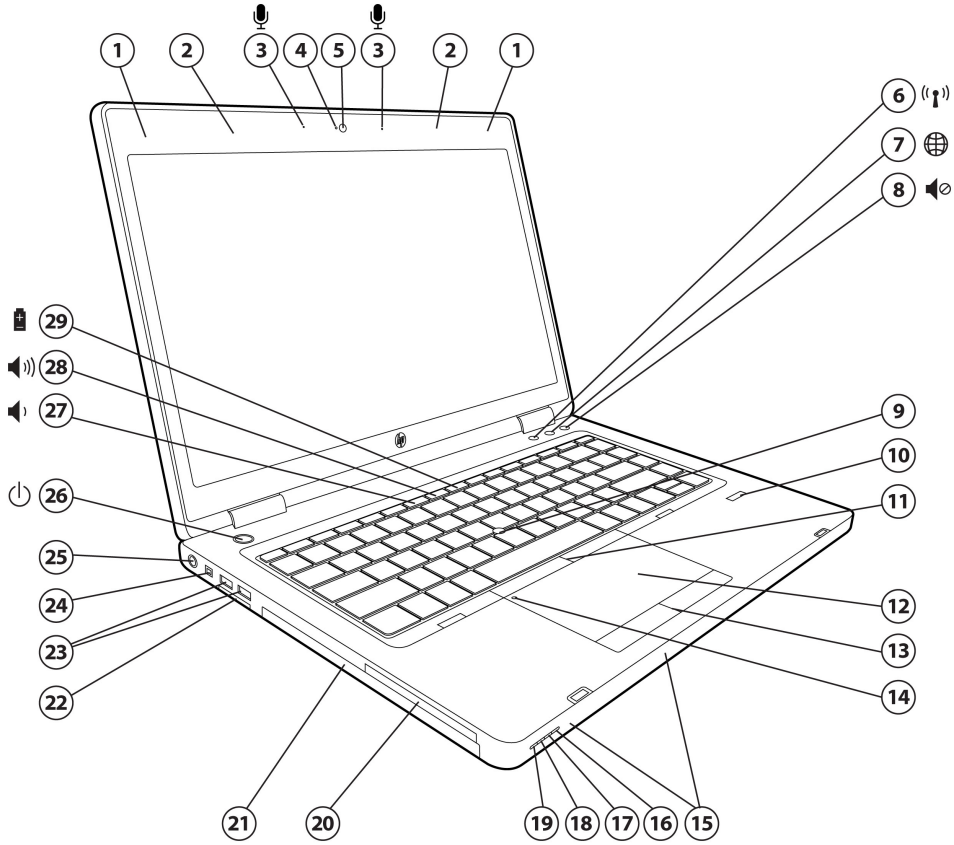
Overview

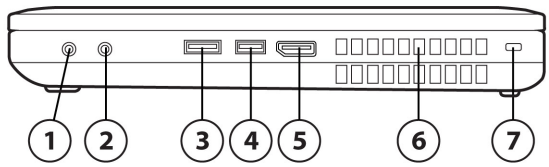


1. WLAN antennas
2. WWAN antennas (select models)
3. Dual-microphone array*
4. Webcam LED indicator (with optional webcam)
5. Optional 720p HD webcam
6. Wireless on/off button with LED indicator
7. Web browser button with LED indicator
8. Volume mute button with LED indicator
9. Optional pointstick
10. Optional HP Fingerprint Sensor
11. Pointstick pick buttons (with optional pointstick)
12. Touchpad with scroll zone
13. Touchpad pick buttons
14. Touchpad on/off button with LED indicator
15. Stereo speakers
16. Hard drive activity / HP 3D DriveGuard LED indicator
17. Battery charging LED indicator
18. Power/standby LED indicator
19. Wireless on/off LED indicator
20. ExpressCard/54 slot or optional Smart Card Reader
21. Upgrade Bay (optical drive, second hard drive or weight saver)
22. Secure Digital/MMC slot
23. (2) USB 3.0 ports
24. 1394a port
25. Power connector
26. Power button with LED indicator
27. Volume down function key
28. Volume up function key
29. HP Power Assistant function key

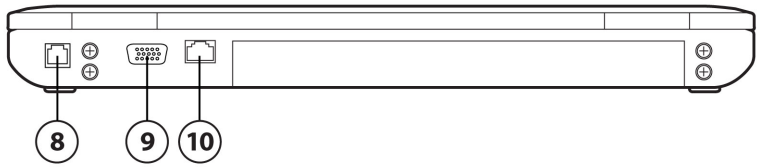
* Models without optional webcam have single integrated microphone on left side of display panel.

Overview

Right View

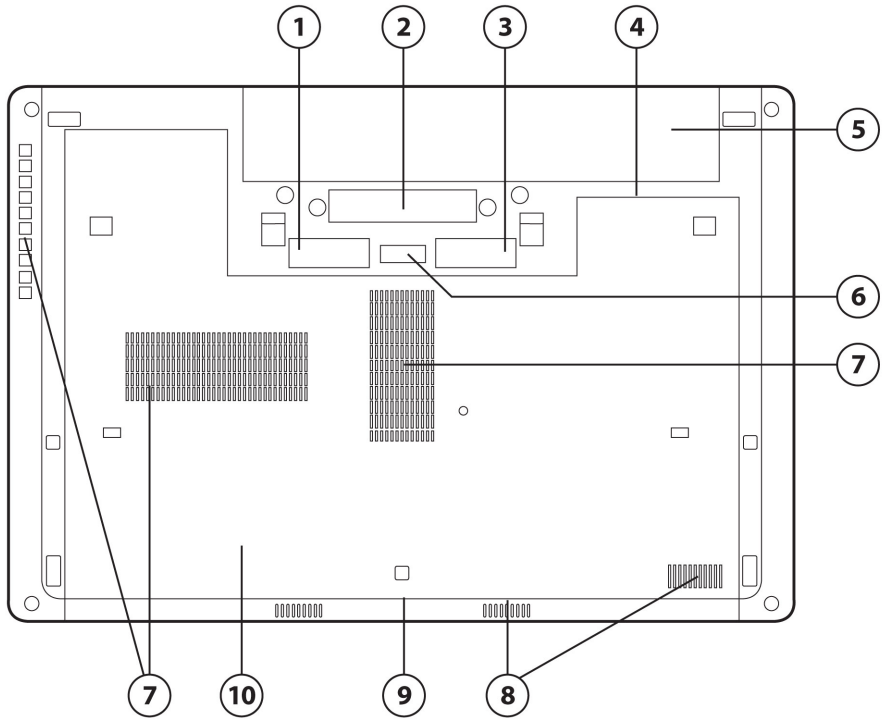


Rear View



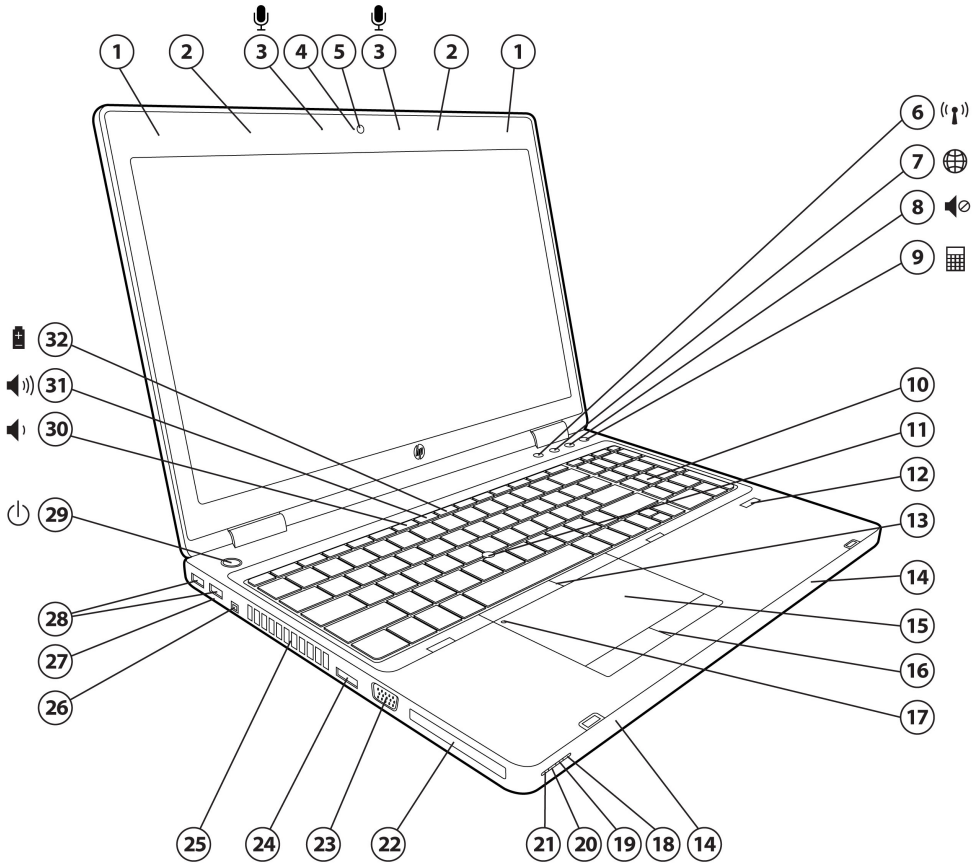
1. Stereo headphone/line out
2. Stereo microphone/line in
3. eSATA/USB 2.0 combo port
4. (1) USB 2.0 port
5. DisplayPort
6. Vents
7. Security lock slot
8. RJ-11/modem port (optional)
9. VGA/external monitor connector
10. RJ-45/Ethernet port

Bottom View



1. Battery release latch
2. Docking connector
3. Bottom cover release latch
4. SIM slot for WWAN (in battery bay; select models)
5. Battery bay
6. Secondary battery connector
7. Vents
8. Speakers
9. Bluetooth module compartment under bottom cover
10. Hard drive, memory, and wireless compartment under bottom cover

HP ProBook 6570b Notebook PC

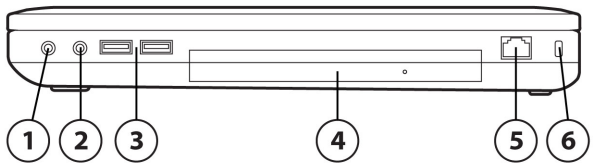


1. WLAN antennas
2. WWAN antennas (select models)
3. Dual-microphone array*
4. Webcam LED indicator (with optional webcam)
5. Optional 720p HD webcam
6. Wireless on/off button with LED indicator
7. Web browser button with LED indicator
8. Volume mute button with LED indicator
9. Calculator button with LED indicator
10. Numeric keypad
11. Optional pointstick
12. Optional HP Fingerprint Sensor
13. Pointstick pick buttons (with optional pointstick)
14. Stereo speakers
15. Touchpad with scroll zone
16. Touchpad pick buttons
17. TouchPad on/off light
18. Hard drive activity / HP 3D DriveGuard LED indicator
19. Battery charging LED indicator
20. Power/standby LED indicator
21. Wireless on/off LED indicator
22. ExpressCard/54 slot or optional Smart Card Reader
23. VGA/external monitor connector
24. eSATA/USB 2.0 combo port
25. Vent
26. 1394a port
27. Secure Digital/MMC slot
28. (2) USB 2.0 ports
29. Power button with LED indicator
30. Volume down function key
31. Volume up function key
32. HP Power Assistant function key

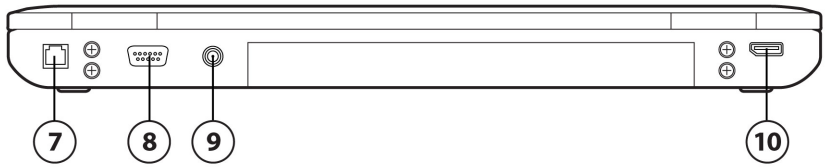
* Models without optional webcam have single integrated microphone on left side of display panel.

Overview

Right View

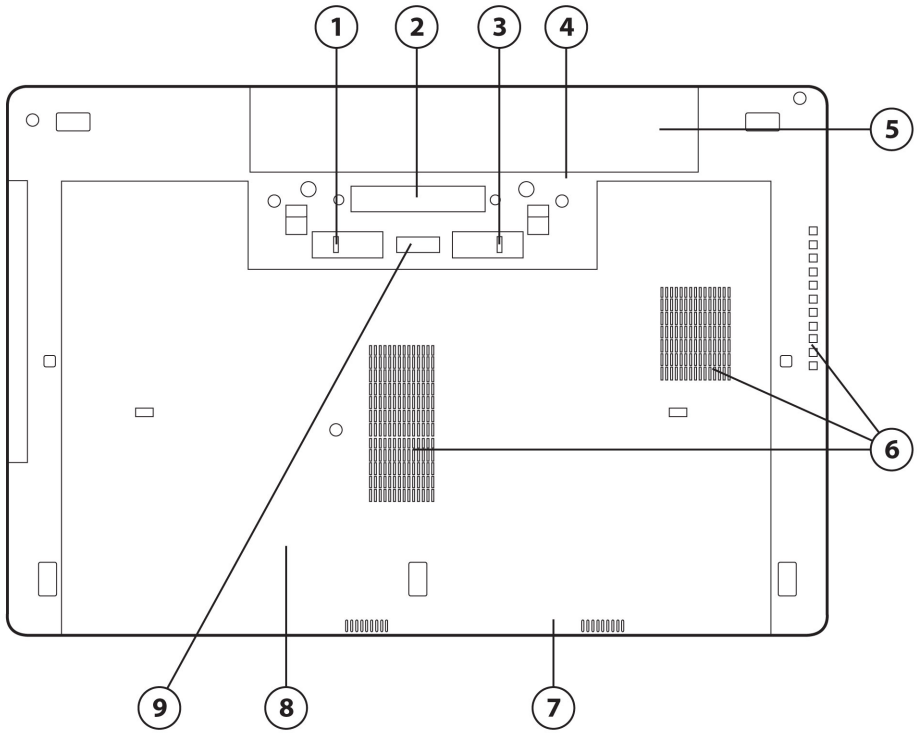


Rear View



1. Stereo headphone/line out
2. Stereo microphone/line in
3. (2) USB 3.0 ports
4. Upgrade Bay (optical drive, second hard drive or weight saver)
5. RJ-45/Ethernet port
6. Security lock slot
7. RJ-11/modem port (Optional)
8. Serial port
9. Power connector
10. DisplayPort

Bottom View



1. Battery release latch
2. Docking connector
3. Bottom cover release latch
4. SIM slot for WWAN (in battery bay; select models)
5. Battery bay
6. Vents
7. Bluetooth module compartment (located under bottom cover)
8. Hard drive, memory, and wireless compartments under bottom cover
9. Secondary battery connector

At A Glance

- Windows 8 versions, Windows 7 versions, SuSE Linux Enterprise Desktop 11, or FreeDOS
- Bead-blast aluminum display enclosure, magnesium support structure, wear-resistant tungsten-colored HP DuraFinish, HP DisplaySafe frame, precision latches, and keyboard in full aluminum deck
- Choice of 3rd generation Intel® Core™ i7 and i5 dual-core processors and 2nd generation Intel® Core i3 dual-core processor, or Celeron® processor
- Intel Core i7 with vPro™ and Core i5 with vPro technology (optional)
- AMD Radeon™ HD 7570M discrete graphics with 1 GB dedicated GDDR5 video memory, integrated Intel HD Graphics 4000 (on Intel Core i7 and i5 configurations), integrated Intel HD Graphics 3000 (on 2nd generation Intel Core i3 configurations), or Intel HD Graphics (on Celeron configurations)
- Widescreen LED-backlit display
  HP ProBook 6470b: 14.0-inch diagonal HD or HD+
  HP ProBook 6570b: 15.6-inch diagonal HD or HD+ WVA
- Easily hot dock with one of the optional HP docking stations
- DisplayPort for high resolution support
- SRS Premium Sound optimized for high fidelity audio
- Choice of primary battery to optimize run-time or weight: 9-cell (100 WHr), 6-cell (55 WHr), 6-cell (55 WHr) HP Long Life Battery, or 3-cell (31 WHr)
- Combine primary battery with optional secondary battery options
- Touchpad with scroll zone; optional pointstick; 6570b features a numeric keypad and calculator button
- Choice of standard ExpressCard slot or optional integrated Smart Card Reader for strong security authentication Security features including HP Client Security (Windows 8 only), HP ProtectTools, with central management across HP and non-HP client PCs
- HP Peak Power Manager* (web download) and HP Power Assistant (Windows 7 only) allow you to conserve power, stretch battery run-time, accurately monitor your reported power needs, and report workforce power consumption.
- Flexible wireless connectivity options:
  - Optional integrated HP hs2350 HSPA+ Mobile Broadband Module connects to both HSPA and HSPA+ (UMTS) networks and provides GPS functionality
  - Optional integrated HP un2430 EV-DO/HSPA Mobile Broadband Module (Gobi 3000) (provides GPS functionality)
  - Optional Integrated Intel Centrino® 802.11 a/b/g/n 2x2 or b/g/n 2x2, Broadcom 802.11 a/b/g/n 2x2, or Atheros b/g/n 1x1 wireless LAN module
  - Bluetooth® v4.0+ EDR
- Upgrade Bay for optical drive, optional second hard drive, or weight saver
- Choice of 7200 rpm user-removable hard drive (up to 750 GB) with HP 3D DriveGuard, 500 GB 7200 rpm Self Encrypting Drive, or 128 GB Solid State Drive
- BFR/PVC-free**, ENERGY STAR qualified (with Microsoft OS) and EPEAT Gold registered in the U.S. (with Microsoft OS). EPEAT status varies by country- please see epeat.net.

* HP Peak Power Manager replaces HP Power Assistant for both Win7 and Win8. HP Peak Power Manager will be available on the web for download for existing product owners.
** Meeting the industry definition of 'BFR/PVC-free' per the iNEMI Position Statement on "Low Halogen" Electronics. Plastic parts incorporated into the chassis generally contain < 1000 ppm (0.1%) of bromine or chlorine. Printed circuit board and substrate laminates generally contain < 1500 ppm (0.15%) of total bromine and chlorine. Service parts after purchase may not be BFR/PVC-free. External accessories, including power supplies, power cords, and peripherals as well as the following customer-configurable internal components: ATT SIM card are not BFR/PVC-free.

OPERATING SYSTEM

Preinstalled	Windows 8 Pro 64* Windows 7 Professional (available through downgrade rights from Windows 8 Pro)** Windows 8 64* Windows 7 Professional 32*** Windows 7 Professional 64*** Windows 7 Home Premium 32*** Windows 7 Home Premium 64*** Windows 7 Home Basic 32*** (select countries) SuSE Linux Enterprise Desktop 11 FreeDOS
Supported	Windows 8 Pro 32* Windows 8 32* Windows 8 Enterprise 32* Windows 8 Enterprise 64* Windows 7 Enterprise 32*** Windows 7 Enterprise 64*** Windows 7 Ultimate 32*** Windows 7 Ultimate 64*** Windows XP Professional 32 Windows Home Basic 64
Certified	SUSE Linux Enterprise Desktop 11

* Not all features are available in all editions of Windows 8. Systems may require upgraded and/or separately purchased hardware, drivers and/or software to take full advantage of Windows 8 functionality. See http://www.microsoft.com for details.
** This system is preinstalled with Windows® 7 Pro software and also comes with a license and media for Windows 8 Pro software. You may only use one version of the Windows software at a time. Switching between versions will require you to uninstall one version and install the other version. You must back up all data (files, photos, etc.) before uninstalling and installing operating systems to avoid loss of your data.
*** Not all features are available in all editions of Windows 7. This system may require upgraded and/or separately purchased hardware to take full advantage of Windows 7 functionality. See http://www.microsoft.com/windows/windows-7/ for details.

PROCESSOR

3rd Generation Intel® Core™ i7-3540M (3.0 GHz, 4 MB L3 cache, 35W, 2 cores)*
Up to 3.70 GHz with Intel Turbo Boost Technology
3rd Generation Intel® Core™ i7-3520M (2.90 GHz, 4 MB L3 cache, 35W, 2 cores)*
Up to 3.60 GHz with Intel Turbo Boost Technology
3rd Generation Intel® Core™ i5-3380M (2.90 GHz, 3 MB L3 cache, 35W, 2 cores)*
Up to 3.60 GHz with Intel Turbo Boost Technology
3rd Generation Intel® Core™ i5-3360M (2.80 GHz, 3 MB L3 cache, 35W, 2 cores)*
Up to 3.50 GHz with Intel Turbo Boost Technology
3rd Generation Intel® Core™ i5-3340M (2.70 GHz, 3 MB L3 cache, 35W, 2 cores)*
Up to 3.40 GHz with Intel Turbo Boost Technology
3rd Generation Intel® Core™ i5-3230M (2.60 GHz, 3 MB L3 cache, 35W, 2 cores)
Up to 3.20 GHz with Intel Turbo Boost Technology
3rd Generation Intel® Core™ i5-3320M (2.60 GHz, 3 MB L3 cache, 35W, 2 cores)*
Up to 3.30 GHz with Intel Turbo Boost Technology
3rd Generation Intel® Core™ i5-3210M (2.50 GHz, 3 MB L3 cache, 35W, 2 cores)*†

Features

Up to 3.10 GHz with Intel Turbo Boost Technology
3rd Generation Intel® Core™ i3-3130M (2.60 GHz, 3 MB L3 cache, 35W, 2 cores)
3rd Generation Intel® Core™ i3-3120M (2.50 GHz, 3 MB L3 cache, 35W, 2 cores)*†
3rd Generation Intel® Core™ i3-3110M (2.40 GHz, 3 MB L3 cache, 35W, 2 cores)*†
2nd Generation Intel® Core™ i3-2370M (2.40 GHz, 3 MB L3 cache, 35W, 2 cores)*†
Intel® Celeron® B840 (1.90 GHz, 2 MB L3 cache, 35W, 2 cores)*

* Multi-Core is designed to improve performance of certain software products. Not all customers or software applications will necessarily benefit from use of this technology. 64-bit computing on Intel® architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers, and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel® 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. Intel's numbering is not a measurement of higher performance.
† Not available with vPro

CHIPSET

Mobile Intel QM77 Express (vPro configurations)
Mobile Intel HM76 Express (non- vPro configurations)

GRAPHICS

Integrated:
Intel HD Graphics 4000 (3rd Generation Intel Core i7 and Core i5)
Intel HD Graphics 3000 (2nd Generation Intel Core i3)
Intel HD Graphics (Celeron configurations)
Discrete:
AMD Radeon™ HD 7570M, with 1 GB dedicated GDDR5 video memory

DISPLAY

HP ProBook 6470b:

Internal
14.0" diagonal LED-backlit HD 16:9 anti-glare (1366 x 768)
14.0" diagonal LED-backlit HD+ 16:9 anti-glare (1600 x 900)
HP Privacy Filter support

External
Up to 32-bit per pixel color depth
DisplayPort
Supports resolutions up to 2560 x 1600, 30-bit color depth at 60 Hz, and full HD (1920 x 1080) monitors, 24-bit color depth at 120 Hz
VGA
Port supports resolutions up to 2048 x 1536 external resolution at75 Hz
DVI-D (single link)
Video signal available through DVI port in optional HP Docking Station (sold separately)
supports resolutions up to 1600 x 1200 at both full and reduced blanking, and 1920 x 1200 at reduced blanking

HP ProBook 6570b:

Features

Internal
15.6" diagonal LED-backlit HD 16:9 anti-glare (1366 x 768)
15.6" diagonal LED-backlit HD+ 16:9 WVA anti-glare (1600 x 900)
HP Privacy Filter support

External
Up to 32-bit per pixel color depth
DisplayPort
Supports resolutions up to 2560 x 1600, 30-bit color depth at 60 Hz, and full HD (1920 x 1080) monitors, 24-bit color depth at 120 Hz
VGA
Port supports resolutions up to 2048 x 1536 at 75 Hz, and lower resolutions at up to 100 Hz
DVI-D (single link)
Video signal available through DVI port in optional HP Docking Station (sold separately)
supports resolutions up to 1600 x 1200 at both full and reduced blanking, and 1920 x 1200 at reduced blanking

NOTE: Resolutions are dependent upon monitor capability, and resolution and color depth settings.

STORAGE AND DRIVES

Primary Storage Bay
Hard Drives
320/500/750 GB 7200 rpm SMART SATA II
500 GB 7200 rpm SMART SATA II Self Encrypting Drive
HP 3D DriveGuard (Windows only)
The hard drive is mounted directly to the notebook frame, reducing the transmission of shock to the hard drive.
Solid State Drive
SATA 6 Gb/s 128 GB Solid State

NOTE: For hard drives, GB = 1 billion bytes. TB = 1 trillion bytes. Actual formatted capacity is less. Up to 16 GB (for Windows 7) of system and up to 30 GB (for Windows 8) disk is reserved for system recovery software.

OPTICAL DRIVES

Fixed 12.7 mm SATA optical drive
Blu-ray ROM DVD+/-RW SuperMulti DL Drive
DVD+/-RW SuperMulti DL Drive
DVD-ROM Drive
Second hard drive
500 GB 7200 rpm SMART SATA II Hard Drive
Weight saver

Features

MEMORY

Standard
DDR3 SDRAM (1600 MHz)*
Two SODIMM slots supporting dual-channel memory
Standard memory up to 8192 MB (2 GB, 4 GB, and 8 GB SODIMMs)
Maximum
Upgradeable to 16384 MB with optional 8192 MB SODIMMs in slots 1 and 2
Dual-channel
Maximized dual-channel performance requires SODIMMs of the same size and speed in both memory slots.

* Maximum memory speed supported by the 2nd Generation Core i3 processor and the Celeron processor is 1333 MHz.

NOTE: Due to the non-industry standard nature of some third-party memory modules, we recommend HP branded memory to ensure compatibility. If you mix memory speeds, the system will perform at the lower memory speed. With Windows Starter 32-bit operating systems, the amount of usable memory is dependent upon your configuration, so that above 3 GB all memory may not be available due to system resource requirements.

NETWORKING/COMMUNICATIONS

Wireless
Support for a broad range of secure, integrated wireless LAN and wireless WAN options featuring support for the latest industry standards. Broadband Wireless (WWAN) requires a Windows operating system and is available in select countries as a standard, factory configurable feature only. Wireless LAN and integrated Bluetooth are also available (both are factory configurable only) and can be combined with either of the supported wireless WAN options.

Mobile Broadband options

HP hs2350 HSPA+ Mobile Broadband Module

HP un2430 EV-DO/HSPA Mobile Broadband Module

Integrated wireless LAN options

Intel Centrino Advanced-N 6205 802.11 a/b/g/n (2x2)

Intel Centrino Wireless-N 2200 802.11 b/g/n (2x2)

Broadcom BCM943228HM4L 802.11 a/b/g/n WiFi Adapter (2x2)

Atheros AR9485 802.11 b/g/n WiFi Adapter (1x1)

HP Integrated Module with Bluetooth 4.0+ EDR Wireless Technology

Communications
Integrated Intel 82579LM Gigabit* Network Connection (vPro configurations)
Integrated Intel 82579V Gigabit* Network Connection (non- vPro configurations)
56K V.92 modem**
* The term "10/100/1000" or "Gigabit" Ethernet indicates compatibility with IEEE standard 802.3ab for Gigabit Ethernet, and does not connote actual operating speed of 1 Gb/s. For high-speed transmission, connection to a Gigabit Ethernet server and network infrastructure is required.
** Designed for downloads from 56K modem compliant sources. Maximum achievable download transmission rates currently do not reach 56 KB/s, and will vary with line conditions. Modem availability is subject to country regulatory approval.

Features

AUDIO/MULTIMEDIA

Audio

SRS Premium Sound™
Integrated stereo speakers
Integrated microphone (dual-microphone array when equipped with optional webcam)
Button for volume mute; function keys for volume up and down
Stereo headphone port
Stereo microphone port

Webcam

Optional 720p HD webcam

- HD format (widescreen)
- Supports videoconferencing and still image capture
- High quality fixed focus lens
- Video capture at various resolutions up to 1280x720 resolution (720p) and up to 30fps
- M-JPEG compression supports higher frame rates for video capture and videoconferencing
- Improved low light sensitivity
- Improved dynamic range

KEYBOARDS/POINTING DEVICES/BUTTONS & FUNCTION KEYS

Keyboard

The HP spill-resistant keyboard is designed using a thin layer of Mylar film under the keyboard and a drain system that funnels fluid through a hole in the bottom of the notebook. This minimizes the risk of damage to sensitive components underneath. The 101/102-key compatible keyboard features a full-pitch key layout with desktop keyboard features, such as the isolated inverted-T cursor control keys, editing keys, both left and right control and alt keys, 12 function keys, and 19.05 x 19.05 mm key pitch (center-to-center spacing). U.S. and International key layouts are available. Other features include hot keys for instant access to power conservation and brightness. The HP ProBook 6570b includes a separate numeric keypad.

Pointing Devices

Touchpad with on/off button, two-way scroll, gestures, two pick buttons
Optional pointstick with two additional pointstick buttons (for a total of four)

Buttons and Function Keys

Discrete buttons provide easy access to the following features: wireless on/off, Web browser, and volume mute. The HP ProBook 6570b also features a calculator button. Function keys provide control of the following features: standby mode, external display, volume down, volume up, HP Power Assistant, and display brightness.

SOFTWARE AND SECURITY

Preinstalled Software with Windows Operating System

Cyberlink Media Suite for Win 8
HP Connection Manager (Windows 7 only)
HP Hotkey Support
HP Peak Power Manager (web download)*
HP Power Assistant (Windows 7 only)
HP ProtectTools for Central Management
HP ProtectTools Security Manager
HP Recovery Manager
HP Support Assistant

Features

HP Webcam Software (select models)
HP Wireless Hotspot (Windows 8 only, web download)
Adobe® Flash Player (Windows 7 only)
Corel WinDVD (select Windows 7models)
Microsoft Office 2010 60 days trial (Windows 8 only)
Microsoft Office Starter (Windows 7 only): reduced-functionality Word and Excel® only, with advertising. No PowerPoint® or Outlook®. Buy Office 2010 to use the full-featured software.**
Microsoft Defender (Windows 8 only, includes MS Security Essentials)
Microsoft Security Essentials (part of Microsoft Defender for Windows 8)
PDF Complete Corporate Edition
Roxio MyDVD Business 2010 (select Windows 7 models)
Roxio Secure Burn (select Windows 7models)
UEFI 2.3 supported by BIOS
WinZip Basic (Windows 7 only)
NOTE: HP Recovery Manager enables fast recovery of the factory preinstalled image if the system becomes corrupted or if important system files are accidentally deleted. Up to 16 GB (for Windows 7) and 36 GB (for Windows 8) of system disk is reserved for the system recovery software.Support in Windows Operating System only.

Additional Software Available from the Web
HP SoftPaq Download Manager
* HP Peak Power Manager replaces HP Power Assistant for both Win7 and Win8. HP Peak Power Manager will be available on the web for download for existing product owners.
** Includes reduced functionality versions of Word and Excel. Purchase of Product Key required to activate full Office 2010 suite available at participating resellers/retailers and http://www.office.com.

Security

Standard
HP Client Security Dashboard (Windows 8 only)
HP ProtectTools
HP Spare Key (requires initial user setup)
Central Management for HP ProtectTools
Credential Manager for HP ProtectTools
Drive Encryption (will be web-only ready at Win8 GA date)
Enhanced Pre-Boot Security
Face Recognition
File Sanitizer for HP ProtectTools (Windows 7 only)
Microsoft Defender (Windows 8 only, includes MS Security Essentials)
Microsoft Security Essentials (part of Microsoft Defender for Windows 8)
Security lock slot
TPM Embedded Security Chip 1.2

Optional
Computrace anti-theft software (requires a subscription)
Intel Anti-Theft Technology (requires a Computrace subscription)
HP Fingerprint Sensor
Smart Card Reader (replaces ExpressCard)
HP Privacy Filter

NOTE: Computrace agent is shipped turned off, and must be activated by customers when they purchase a subscription. Subscriptions can be purchased for terms ranging from one to five years. Service is limited, check with Absolute for availability outside the U.S.

For more information on HP security solutions refer to: http://www.hp.com/go/security.

POWER

Power Supply

Models with discrete graphics:
External 90-watt Smart AC adapter
Models with integrated graphics:
External 65-watt Smart AC adapter
Power cord included is 6-foot (1.8 meter).
Total length including external AC adapter is 12 feet (3.66 meter).
HP Fast Charge (not supported on 9-cell primary or secondary batteries)

Primary Battery

HP 9-cell Lithium-Ion Battery (100 WHr)
HP 6-cell Lithium-Ion Battery (55 WHr)
HP 6-cell HP Long Life Lithium-Ion Battery (55 WHr)
HP 3-cell Lithium-Ion Battery (31 WHr)

Secondary Battery

HP Extended Life Notebook Battery (9-cell /73 WHr)
HP Ultra Extended Life Notebook Battery (9-cell /100 WHr)

Battery Life*

HP ProBook 6470b**

9-cell (100 WHr)	Up to 15 hours and 15 minutes
6-cell (55 WHr)	Up to 8 hours and 15 minutes
with optional HP ST09 Extended Life Notebook Battery	Up to 19 hours and 30 minutes
with optional HP BB09 Ultra Extended Life Notebook Battery	Up to 24 hours
3-cell (31 WHr)	Up to 4 hours and 15 minutes

HP ProBook 6570b**

6-cell (55 WHr)	Up to 7 hours and 15 minutes
with optional HP ST09 Extended Life Notebook Battery	Up to 17 hours and 30 minutes
with optional HP BB09 Ultra Extended Life Notebook Battery	Up to 21 hours
9-cell (100 WHr)	Up to 13 hours
3-cell (31 WHr)	Up to 3 hours and 45 minutes

System Standby Time

Up to 4 weeks

Features

Battery life will vary depending on the product model, configuration, loaded applications, features, use, wireless functionality and power management settings. The maximum capacity of the battery will naturally decrease with time and usage. See MobileMark07 battery benchmark http://www.bapco.com/products/mobilemark2007 for additional details.
** Configurations with integrated graphics.
NOTE: Fast Charge recharges your battery up to 90% within 90 minutes when the system is off. Please note that 9-cell batteries do not support Fast Charge.

Power Conservation
AMD PowerPlay technology (models with discrete graphics)
Hibernation
Standby
ACPI compliance

ENVIRONMENTAL

ENERGY STAR qualified (with Microsoft OS)
IT ECO Declaration
EPEAT Gold where HP registers commercial notebook products. See http://www.epeat.net for registration status in your country.

NOTE: This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks.

WEIGHTS & DIMENSIONS

6470b

Weight
Starting at 4.48 lb (2.03 kg)

Dimensions (w x d x h)
13.31 x 9.11 x 1.34 in (at front)
33.8 x 23.1 x 3.4 cm (at front)

6570b

Weight
Starting at 5.53 lb/2.51 kg (3-cell with weight saver)
Starting at 5.75 lb/2.61 kg (3-cell with optical drive)

Dimensions (w x d x h)
14.72 x 9.86 x 1.35 in (at front)
37.4 x 25.1 x3.4 cm (at front)

NOTE: Height varies depending upon where on the notebook the measurement is made. Weight varies by configuration and components. Weight includes 6-cell battery, hard drive, 1 GB memory, and no optical drive. Weight varies by configuration and components.

Features

PORTS/SLOTS

Ports

6470b
VGA - One
DisplayPort - One (UMA: v1.1a; discrete: v1.2)
Stereo microphone port - One
Stereo headphone port - One
Power Connector - One
Secondary Battery Connector - One
Docking Connector - One
RJ-45 (Ethernet) - One
RJ-11 (Modem)- One (Optional)
1394a - One
USB 3.0 - Two
USB 2.0 - One
eSATA/USB 2.0 combo port - One

6570b
VGA - One
DisplayPort - One (UMA: v1.1a; discrete: v1.2)
Stereo microphone port - One
Stereo headphone port - One
Power Connector - One
Secondary Battery Connector - One
Docking Connector - One
RJ-45 (Ethernet) - One
RJ-11 (Modem)- One (Optional)
1394a - One
USB 3.0 - Two
USB 2.0 - Two
eSATA/USB 2.0 combo port - One
Serial port - One

Digital Media Slots
1 ExpressCard/54 slot
1 SD/MMC slot (supported media include: SD, SDHC, SDXC, MMC, MMC+)

SERVICE AND SUPPORT

HP Services offers limited 3-year and 1-year warranty options depending on country;
1-year limited warranty on primary battery; 3-year limited warranty on HP Long Life Battery (only available with 3-year platform warranty). On-site service and warranty upgrades are also available. HP Care Pack Services extend service contracts beyond the standard warranties. To choose the right level of service for your HP product, use the HP Care Pack Services Lookup Tool at: http://www.hp.com/go/lookuptool. Additional HP Care Pack Services information by product is available at: http://www.hp.com/hps/carepack.

NOTE: Certain restrictions and exclusions apply. Consult the HP Customer Support Center for details.
http://h20000.www2.hp.com/bizsupport/TechSupport/ProductRoot.jsp

SYSTEM UNIT

Stand-Alone Power Requirements (AC Power)	**Nominal Operating Voltage**	18.5 V		
	Average Operating Power	**HP EliteBook 6570b**	**Windows 7 (32-bit)**	**Windows 7 (64-bit)**
		Integrated graphics	10.23 W	10.42 W
		Discrete graphics	13.5 W	13.88 W
		HP EliteBook 6470b		
		Integrated graphics	9.14 W	9.07 W
		Discrete graphics	13.62 W	13.31 W
	Max Operating Power	< 65 W or < 90 W		
Temperature	**Operating**	32° to 95° F (0° to 35° C) (not writing optical) 41° to 95° F (5° to 35° C) (writing optical)		
	Non-operating	-4° to 140° F (-20° to 60° C)		
Relative Humidity	**Operating**	10% to 90%, non-condensing		
	Non-operating	5% to 95%, 101.6° F (38.7° C) maximum wet bulb temperature		
Shock	**Operating**	40 G, 2 ms, half-sine		
	Non-operating	200 G, 2 ms, half-sine		
Random Vibration	**Operating**	0.75 grms		
	Non-operating	1.50 grms		
Altitude (unpressurized)	**Operating**	-50 to 10,000 ft (-15.24 to 3,048 m)		
	Non-operating	-50 to 40,000 ft (-15.24 to 12,192 m)		
Planned Industry Standard Certifications	**UL**	Yes		
	CSA	Yes		
	FCC Compliance	Yes		
	ENERGY STAR®	Select models*		
	EPEAT	Registered Gold in United States**		
	ICES	Yes		
	Australia / NZ A-Tick Compliance	Yes		
	CCC	Yes		
	Japan VCCI Compliance	Yes		
	KC	Yes		
	BSMI	Yes		
	CE Marking Compliance	Yes		
	BNCI or BELUS	Yes		
	CIT	Yes		
	GOST	Yes		

Saudi Arabian Compliance (ICCP)	Yes
SABS	Yes
UKRSERTCOMPUTER	Yes

* Configurations of the HP ProBook 6470b and HP ProBook 6570b that are ENERGY STAR qualified are identified as HP 6470b ENERGY STAR and HP 6570b ENERGY STAR on HP websites and on www.energystar.gov.
** EPEAT registration varies by country. See www.epeat.net for registration status by country.
EPEAT status listed above applies to U.S.

For accessibility information on HP products, please visit: http://www.hp.com/accessibility.

DISPLAY

14.0-inch LED HD (1366 x 768) anti-glare	**Dimensions** (W x H)	12.74 x 7.56 in (32.4 x 19.2 cm)	
	Diagonal Size	14.0 in (35.6cm)	
	Surface Treatment	Anti-glare	
	Contrast Ratio	400:1 (typical)	
	Refresh Rate	60 Hz	
	Brightness	200 nit (typical)	
	Pixel Resolution	**Pitch**	0.227 mm
		Format	1366 x 768
		Configuration	RGB Stripe
	Backlight	LED	
	PPI	112 ppi	
	Viewing Angle	±30° Horizontal, ±10° Vertical (minimum) 30/30/20/10 (Left/Right/Down/Up) (minimum) or 45/45/35/25 (Left/Right/Down/Up) (typical)	

Technical Specifications

14.0-inch LED HD+ (1600 x 900) anti-glare	**Dimensions** (W x H)	12.74 x 7.56 in (32.4 cm x 19.2 cm)	
	Diagonal Size	14.0 in (35.6cm)	
	Surface Treatment	Anti-glare	
	Contrast Ratio	300 (min)	
	Refresh Rate	60 Hz	
	Brightness	200 nits (typical)	
	Pixel Resolution	**Pitch**	0.1935mm
		Format	1600 x 900
		Configuration	RGB Stripe
	Backlight	LED	
	PPI	131 ppi	
	Viewing Angle	30/30/20/10 (Left/Right/Down/Up) (minimum)	

15.6-inch LED HD (1366 x 768) anti-glare	**Dimensions** (W x H)	13.54 x 7.59 in (34.4 x 19.4 cm)	
	Diagonal Size	15.6 in (39.6cm)	
	Surface Treatment	Anti-glare	
	Contrast Ratio	300:1 (typical)	
	Refresh Rate	60 Hz	
	Brightness	200 nit (typical)	
	Pixel Resolution	**Pitch**	0.252 mm
		Format	1366 x 768
		Configuration	RGB Stripe
	Backlight	LED	
	PPI	100 ppi	
	Viewing Angle	±30° Horizontal, ±10° Vertical (minimum) 30/30/20/10 (Left/Right/Down/Up) (minimum) or 45/45/35/25 (Left/Right/Down/Up) (typical)	

Technical Specifications

15.6-inch LED HD+ WVA (1600 x 900) anti-glare	**Dimensions** (W x H)	13.54 x 7.59 in (34.4 x 19.4 cm)	
	Diagonal Size	15.6 in (39.6cm)	
	Surface Treatment	Anti-glare	
	Contrast Ratio	300:1 (typical)	
	Refresh Rate	60 Hz	
	Brightness	200 nit (typical)	
	Pixel Resolution	**Pitch**	0.215 mm
		Format	1600 x 900
		Configuration	RGB Stripe
	Backlight	LED	
	PPI	118 ppi	
	Viewing Angle	±60° Horizontal, ± 50° Vertical (minimum) or ±70° Horizontal, ±60° Vertical (typical)	

STORAGE AND DRIVES

Internal Storage

750 GB 7200 rpm SATA Hard Drive	**Drive Weight**	0.22 lb (101 g)	
	Capacity	750 GB	
	Height	0.37 in (9.5 mm)	
	Width	2.75 in (70 mm)	
	Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ	
	Transfer Rate	**Synchronous** (maximum)	300 MB/s (Drive Capability)
	Seek Time (typical reads, including settling)	**Single Track**	1.5 ms
		Average	11 ms
		Maximum	22 ms
	Rotational Speed	7200 rpm	
	Logical Blocks	1,465,149,168	
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]	
	Features	ATA Security	

Technical Specifications

500 GB 7200 rpm SATA Hard Drive	**Drive Weight**	0.25 lbs (115g)	
	Capacity	500 GB	
	Height	0.37 in (9.5 mm)	
	Width	2.75 in (70 mm)	
	Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ	
	Transfer Rate	**Synchronous** (maximum)	300 MB/s (Drive Capability)
	Seek Time (typical reads, including settling)	**Single Track**	1.5 ms
		Average	11 ms
		Maximum	22 ms
	Rotational Speed	7200 rpm	
	Logical Blocks	976,773,168	
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]	
	Features	ATA Security	

500 GB 7200 rpm SMART SATA II Self Encrypting Drive	**Drive Weight**	0.25 lbs (115g)	
	Capacity	500 GB	
	Height	0.37 in (9.5 mm)	
	Width	2.50 in (63.5 mm)	
	Interface	ATA-8, SATA 2.6, 3.0 Gb/s	
	Transfer Rate	**Synchronous** (maximum)	300 MB/s (Drive Capability)
	Seek Time (typical reads, including settling)	**Single Track**	1 ms
		Average	12 ms
		Maximum	20 ms
	Rotational Speed	7200 rpm	
	Logical Blocks	976,773,168	
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]	
	Features	ATA Security	

Technical Specifications

320 GB 7200 rpm SATA Hard Drive	**Drive Weight**	0.25 lbs (115 g)	
	Capacity	320 GB	
	Height	0.37 in (9.5 mm)	
	Width	2.75 in (70 mm)	
	Interface	ATA-8, SATA 2.6, 3.0 Gb/s, NCQ	
	Transfer Rate	**Synchronous** (maximum)	300 MB/s (Drive Capability)
	Seek Time (typical reads, including settling)	**Single Track**	1.5 ms
		Average	11 ms
		Maximum	22 ms
	Rotational Speed	7200 rpm	
	Logical Blocks	625,142,448	
	Operating Temperature	32° to 140° F (0° to 60° C) [case temp]	
	Features	ATA Security	

SATA 6 Gb/s 128 GB, 2.5-inch Solid State Drive	**Drive Weight**	73 Grams	
	Capacity	128 GB	
	Height	0.276 in (7 mm)	
	Width	2.76 in (70 mm)	
	Interface	SATA 3 (6 Gb/s)	
	Performance	**Maximum Sequential Read**	**Maximum Sequential Write**
		415 MB/s	175 MB/s
	Logical Blocks	250,069,680	
	Operating Temperature	32° to 158°F (0° to 70°C) [case temp]	
	Features	ATA Security; ATA-8; SATA 3.0 DIPM; TRIM	

Optical Drives

Technical Specifications

DVD-ROM Drive	**Access Times**	Random	< 140 ms CD (typical) < 160 ms DVD (typical)
	Max Data Transfer Rate	24X CD-ROM 8X-DVD	
	Transfer Mode	UDMA Mode 5	
	Interface	Gen 1 SATA	
	Supported Media (read)	CD-DA, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM	
	Supported Media (write)	None	
	Max Media Capacity (read)	8.5GB	
	Transport	Tray Loading	

DVD+/-RW SuperMulti DL Drive	**Access Times**	Random	<140ms CD (typical) < 160 ms DVD (typical)
	Max Data Transfer Rate	24X CD-ROM 8X DVD 24X CD-R 24X CD-RW 8X DVD+R 8X DVD+RW 8X DVD-R 6X DVD-RW 6X - DVD+R Dual Layer 6X - DVD-R Dual Layer 5X DVD-RAM	
	Transfer Mode	UDMA Mode 5	
	Interface	Gen 1 SATA	
	Supported Media (read)	CD-DA, CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-RAM	
	Supported Media (write)	CD-R, CD-RW, DVD+R, DVD+RW, DVD-R, DVD-RW, DVD-RAM, DVD+R DL, DVD-R DL	
	Max Media Capacity (read)	8.5 GB	
	Max Media Capacity (write)	8.5 GB	
	Transport	Tray Loading	

Technical Specifications

Blu-ray ROM DVD+/-RW SuperMulti DL Drive	**Access Times**	Random	<190 ms CD-ROM (typical) < 180ms DVD-ROM (typical) <230 ms BD-ROM (typical)
	Max Data Transfer Rate	24X CD-ROM 8X DVD-ROM 24X CD-R 16X CD-RW 8X DVD+R 8X DVD+RW 8X DVD-R 6X DVD-RW 4X - DVD+R Dual Layer 4X - DVD-R Dual Layer 5X DVD-RAM 6X BD-ROM	
	Transfer Mode	UDMA Mode 5	
	Interface	Gen 1 SATA	
	Supported Media (read)	CD-DA, , CD-TEXT, CD-ROM, CD-ROM XA, MIXED MODE CD, CD-I, CD-I Bridge (Photo-CD, Video CD), Multisession CD (Photo-CD, CD-EXTRA, Portfolio, CD-R, CD-RW), CD-R, CD-RW, DVD-ROM (DVD-5, DVD-9, DVD-10, DVD-18), DVD-R, DVD-RW, DVD+R, DVD+RW. DVD-RAM, BD-ROM, BD-R, BD-RE	
	Supported Media (write)	CD-R, CD-RW, DVD+R, DVD+R DL, DVD+RW, DVD-R, DVD-R DL, DVD-RW, DVD-RAM	
	Max Media Capacity (read)	50.0 GB	
	Max Media Capacity (write)	8.5GB	
	Transport	Tray Loading	

SECURITY

HP Fingerprint Sensor (optional)	**Mobile Voltage Operation**	3.0V-3.6V Single Supply
	Operating Temperature	32° - 158°F (0° - 70°C)
	Current Consumption @ 3.3V	Less than 70 mA peak imaging and scrolling Less than 25 mA hardware finger detection Advanced Power Management
	High-Rate Image Capture	Up to 240 image frames /sec
	ESD Resistance	IEC 61000-4-2 Level 4 (±15KV)
	Detection Matrix	192 x 16 Pixels 9.7 mm x 0.81 mm 500 ppi High-Resolution Images

NETWORKING/COMMUNICATIONS

Intel® 82579LM Gigabit Network Connection	**Ethernet Features**	10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14) 100 10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14) 100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30) 1000 Mbti/s operation (1000BASE-T; IEEE 802.3ab; IEEE 8023. Clauses 40) Auto-Negotiation (Automatic Speed Selection) Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s IEEE 802.1p QoS (Quality of Service) Support IEEE 802.1q VLAN support IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable) IEEE 802.3az EEE(Energy Efficient Ethernet) Jumbo Frame 9K Auto MDI/MDIX Crossover cable detection
	Power Management	ACPI compliant - multiple power modes Energy Detect Low Power Mode(Green Ethernet)
	Performance Features	TCP/IP/UDP Checksum Offload (configurable) Protocol Offload(ARP & NS) Large send offload and Giant send offload Receiving Side Scaling MACSec Offload (802.3ae) Intel vPro iSCSI Boot
	Manageability	Wake-on-LAN from standby and hibernation (Magic Packet and Microsoft Wake-Up Frame); Wake-on-LAN from off (Magic Packet only) PXE 2.1 Remote Boot Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30)) Comprehensive diagnostic and configuration software suite Virtual Cable Doctor for Ethernet cable status
	Interface	PCI Express 1.1 x1 to fully support ASPM L0s/L1 and CLKREQ. **NOTE:** Intel 82579 PCIe interface is not PCIe compliant. It operates at half of PCIe specification V1.1 (2.5GT/S) speed.
	NIC Device Driver Name	Intel 82579LM/82579V Ethernet Network Connection

Technical Specifications

Intel® 82579V Gigabit Network Connection	**Ethernet Features**	10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14) 100 10 Mbit/s operation (10BASE-T; IEEE 802.3i; IEEE 802.3 clauses 13-14) 100 Mbit/s operation (100BASE-TX; IEEE 802.3u; IEEE 802.3 clauses 21-30) 1000 Mibt/s operation (1000BASE-T; IEEE 802.3ab; IEEE 8023 clauses 40) Auto-Negotiation (Automatic Speed Selection) Full Duplex Operation at all Speeds, Half Duplex operation at 10 and 100 Mbit/s IEEE 802.1p QoS (Quality of Service) Support IEEE 802.1q VLAN support IEEE 802.3x Flow Control (IEEE 802.3 clauses 31-32; configurable) IEEE 802.3az EEE(Energy Efficient Ethernet) Jumbo Frame 9K Auto MDI/MDIX Crossover cable detection
	Power Management	ACPI compliant - multiple power modes Energy Detect Low Power Mode(Green Ethernet)
	Performance Features	TCP/IP/UDP Checksum Offload (configurable) Protocol Offload(ARP & NS) Large send offload and Giant send offload Receiving Side Scaling
	Manageability	Wake-on-LAN from standby and hibernation (Magic Packet and Microsoft Wake-Up Frame); Wake-on-LAN from off (Magic Packet only) PXE 2.1 Remote Boot Statistics Gathering (SNMP MIB II, Ethernet-like MIB, Ethernet MIB (802.3x, clause 30)) Comprehensive diagnostic and configuration software suite Virtual Cable Doctor for Ethernet cable status
	Interface	Intel PCI Express-Base 1.1 x1 to fully support ASPM L0s/L1 and CLKREQ **NOTE:** Intel 82579 PCIe interface is not PCIe compliant. It operators at half of PCIe specification V1.1 (2.5GT/S) speed.
	NIC Device Driver Name	Intel 82579LM/82579V Ethernet Network Connection
V.92 56K Data/Fax Modem	**Form Factor**	MDC 1.5 Daughtercard
	Power Management Support	APM Revision 1.2, ACPI
	Approvals/ Certifications	UL, CSA, NEMKO, CCIB, Industry Canada, FCC Part 68, CTR21, FCC Part 15 Class B, Canadian ICES-003 Class B, C.I.S.P.R.22, Australian ACA, CE Mark, Other Countries
	Data Mode Capabilities	V.92 data V.8bis V.80 V44, V.42bis, MNP5 (Compression) V.42 (LAPM, MNP2-4) (Error Correction) **Optional symbol rates**: 2800, 3429 Asymmetric Symbol rates **Synchronous primary channel data signaling rates**:

		3600, 31200 Automatic rate re-negotiation V.34 V.32bis V.32 V.23 V.22bis V.22 V.21 Bell 212A Bell 103J
	Fax Mode Capabilities	TIA/EIA-578-B (Class 1) T.30, T.4 (Group 3) V.17 V.29 V.27ter V.21 Channel 2 T.31
	Command Set	V.250 (Partial) TIA-602 Identification: +GMI, +GMM, +GMR Port control: +IPR, +ICF, +IFC, +ILRR Modulation: +MS, +MR, +MA Error control: +ES, +ER, +EB, +ESR, +ETBM Data compression: +DS, +DR V.251
HP un2430 EV-DO/HSPA Mobile Broadband Module	**Technology/Operating Bands**	GSM/GPRS/EDGE: 850MHz(Cell), 900MHz(EGSM), 1800MHz(DCS), 1900MHz (PCS) UMTS/WCDMA with receive diversity: 2100MHz (UTRA FDD Band I), 1900MHz (UTRA FDD Band II), AWS (UTRA FDD Band IV), 900MHz(UTRA FDD Band VIII), 850MHz (UTRA FDD Band V) 1xEVDO/1xRTT with receive diversity: 850MHz (Band Class0-Cell), 1900MHz (Band Class1-PCS)
	Wireless Protocol Standards	GSM/GPRS/EDGE: Class A, Multi-slot class 10 operation, coding schemes CS1 - CS4 and MSC1 - MSC9. UMTS/WCDMA: Release 99 and Release 6 CDMA: 1xEVDO Release 0 and Release A, IS-95A, IS-95B, IS-856, IS-2000
	Wireless Parametric Standards	Meets or exceeds TIA/EIA IS-98-D
	Maximum Data Rates	UMTS (HSPA) - 14.4 Mbps (Download), 5.76Mbps (Upload) CDMA (EVDO Release A) - 3.1 Mbps (Download), 1.8Mbps (Upload)
	GPS	Standalone GPS enabled gpsOneXTRATM™
	GPS Bands	L1 - 1575.42 MHz
	Maximum Output Power	GSM/GPRS/EDGE: 32dBm (+/-1) WCDMA: 24dBm (+0.7/-2.3) CDMA: 24dBm (+0.7/-2)

Technical Specifications

	Maximum Power Consumption	2750mA (peak); 1100mA (average)
	Power Consumption, Idle Not Connected	20 mA
	Power Management	USB selective suspend Integrated notebook wireless button
	Antenna Type	Dual high efficiency 5 band antennae with spatial diversity, mounted in the display enclosure
	Form Factor	PCI-Express MiniCard, USB 2.0 interface
	Weight	11.5 g
	Dimensions (Length x Width x Thickness)	2.01 x 1.18 x 0.18 in (51 x 30 x 5 mm)
	Voltage, Operating	3.3v +/- 10%
	Temperature, Operating (from TIA/EIA/IS-98-D)	-22° to 158° F (-30° to 70° C) (full RF performance) -22° to 167° F (-30° to 75° C) (reduced RF performance)
	Temperature, Non-operating, 96 hours (from MIL-STD 202 Method 108)	-40° to 185° F (-40° to 85° C)
	Humidity, Non-operating	95% relative humidity for 48 hours @ 185° F (85° C) (non-condensing)
	Configuration Utilities	HP Connection Manager
	LED Activity	LED Off - Radio Off; Solid LED On - Radio On
HP hs2350 HSPA+ Mobile Broadband Module	**Technology/Operating Bands**	GSM/GPRS/EDGE: 850MHz(Cell), 900MHz(EGSM), 1800MHz(DCS), 1900MHz (PCS) UMTS/WCDMA with receive diversity: 2100MHz (UTRA FDD Band I), 1900Mhz (UTRA FDD Band II), 900Mhz(UTRA FDD Band VIII), 850 MHz (UTRA FDD Band V)
	Wireless Protocol Standards	GSM/GPRS/EDGE: Class B, Multi-slot class 10 operation, coding schemes CS1 - CS4 and MSC1 - MSC9. UMTS/WCDMA: Release 99 and Release 7 Advanced Receiver Type 3i
	Wireless Parametric Standards	Complies with 3GPP specifications
	Maximum Data Rates	UMTS (HSPA) - 21 Mbps (Download), 5.76Mbps (Upload)
	GPS	Standalone, A-GPS (Internet- and Network assisted)
	GPS Bands	1575.42 MHz (± 1.023 MHz)
	Maximum Output Power	GSM/EDGE GSM850 & GSM900 bands GPRS: +33 dBm ± 2 dBm (class 4) EGPRS: +27 dBm ± 3 dBm (class E2) DCS1800 & PCS1900 bands GPRS: +30 dBm ± 2 dBm (class 1) EGPRS: +26 dBm +4 / -3 dBm (class E2)

		UMTS UTRA FDD Bands +24 dBm +4 / -3 dBm (class 3)
	Maximum Power Consumption	2000mA (peak); 600mA (average)
	Power Consumption, Sleep Mode	5 mA
	Power Management	USB selective suspend Integrated notebook wireless button
	Antenna Type	Dual high efficiency 5 band antennae with spatial diversity, mounted in the display enclosure
	Form Factor	PCI-Express MiniCard, USB 2.0 interface
	Weight	< 12 g
	Dimensions (Length x Width x Thickness)	2.01 x 1.18 x 0.18 in (51 x 30 x 5 mm)
	Voltage, Operating	3.3v +/- 9%
	Temperature, Operating	14° to 149° F (-10° to 65° C) (full RF performance) 14° to 167° F (-10° to 75° C) (reduced RF performance)
	Temperature, Non-operating, 96 hours (from MIL-STD 202 Method 108)	-22° to 185° F (-30° to 85° C)
	Humidity, Non-operating	85% relative humidity for 48 hours @ 185° F (85° C) (non-condensing)
	Configuration Utilities	HP Connection Manager
	LED Activity	LED Off - Radio Off; Solid LED On - Radio On
Intel Centrino Wireless-N 2200 802.11 b/g/n (2x2)	**Wireless LAN Standards**	IEEE 802.11b IEEE 802.11g IEEE 802.11n
	Interoperability	Wi-Fi certified Cisco Compatible Extensions Program compliant with Microsoft Windows 7, Windows Vista and XP (details at: http://www.hp.com/go/notebooks/WLAN)
	Frequency Band	2.4 GHz
	Antenna Structure	2 transmit; 2 receive (2x2)
	Data Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: many possible data rates, ranging from 6 Mbps to 300 Mbps, depending on the combination of Bandwidth, Modulation Coding Scheme, and Guard Interval used, as defined in IEEE 802.11n specification
	Modulation	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM
	Security[1]	Authentication: WPA and WPA2, 802.1x (EAP_TLS, TTLS, PEAP, LEAP, EAP-FAST)

	Authentication Protocols: PAP, CHAP, TLS, GTC, MS-CHAP, MS-CHAPv2 Encryption: 64 and 128-bit WEP, AES-CCMP, CKIP, TKIP Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4) with Microsoft Windows Vista and XP only.	
Sub-channels	Multinational support with frequency bands and channels compliant to local regulations.	
Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK	
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)	
Roaming	IEEE 802.11 compliant roaming between 2.4GHz band Access Points	
Output Power (for CCK and OFDM)[2]	15 dBm typical	
Power Consumption	Transmit: 1.4 Watts (average, with one spatial streams) Receive: 1.3 Watts (average with two receive chains) Idle mode[3]: 30 mW (average) Radio off: 20 mW (max)	
Power Management	ACPI compliant power management 802.11 compliant power saving mode	
Receiver Sensitivity[4]	54 Mbps: -74 dBm, 6 Mbps: -91 dBm	
Antenna Connections	2 U.FL type connectors, 50 ohm nominal impedance	
Form Factor	PCI-Express Half-MiniCard	
Weight	0.0075 lb (3.4 g)	
Dimensions	0.12 x 1.06 x 1.18 in (3.1 x 26.8 x 30.0 mm)	
Operating Voltage	3.3V +/- 9%	
Temperature	Operating Non-operating	32° to 176° F (0° to 80° C) -40° to 176° F (-40° to 80° C)
Humidity	Operating Non-operating	10% to 90% (non-condensing) 5% to 90% (non-condensing)
Altitude	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)
LED Activity	LED Off - Radio OFF; Solid LED On - Radio ON	

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. In Power Save Polling mode and on battery power.
4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).
5. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsoft Windows XP. WLAN may also be compatible with certain third-party software supplicants. WLAN supplier IHV extensions required for Cisco Compatible Extensions support for Microsoft Windows Vista.

Intel Centrino Advanced-N	**Wireless LAN Standards**	IEEE 802.11a

Technical Specifications

6205 (2x2)		IEEE 802.11b IEEE 802.11g IEEE 802.11n
	Interoperability	Wi-Fi certified Cisco Compatible Extensions Program compliant with Microsoft Windows 7, Windows Vista and XP (details at: http://www.hp.com/go/notebooks/WLAN)
	Frequency Band	2.4 GHz and 5GHz
	Antenna Structure	2 transmit; 2 receive (2x2)
	Data Rates	802.11a: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: 66 possible data rates, ranging from 6 Mbps to 300 Mbps, depending on the combination of Bandwidth, Modulation Coding Scheme, and Guard Interval used, as defined in IEEE 802.11n specification
	Modulation	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM
	Security[1]	Authentication: WPA and WPA2, 802.1x (EAP_TLS, TTLS, PEAP, LEAP, EAP-FAST) Authentication Protocols: PAP, CHAP, TLS, GTC, MS-CHAP, MS-CHAPv2 Encryption: 64 and 128-bit WEP, AES-CCMP, CKIP, TKIP Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4) with Microsoft Windows Vista and XP only.
	Sub-channels	Multinational support with frequency bands and channels compliant to local regulations.
	Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK
	Network Architecture **Models**	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
	Roaming	IEEE 802.11 compliant roaming between 2.4GHz band Access Points
	Output Power (for CCK and OFDM)[2]	17 dBm max
	Power Consumption	Transmit: 2.3 Watts (max, with two spatial streams) Receive: 1 Watt (max with two spatial streams) Idle mode[3]: 35 mW (average) Radio off: 20 mW (max)
	Power Management	ACPI compliant power management 802.11 compliant power saving mode
	Receiver Sensitivity[4]	54 Mbps: -76 dBm, 6 Mbps: -92 dBm
	Antenna Connections	2 U.FL type connectors, 50 ohm nominal impedance
	Form Factor	PCI-Express Half-MiniCard
	Weight	0.0075 lb (3.4 g)
	Dimensions	0.12 x 1.06 x 1.18 in (3.1 x 26.8 x 30.0 mm)
	Operating Voltage	3.3V +/- 9%

Temperature	Operating Non-operating	32° to 176° F (0° to 80° C) -40° to 176° F (-40° to 80° C)
Humidity	Operating Non-operating	10% to 90% (non-condensing) 5% to 90% (non-condensing)
Altitude	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)
LED Activity	LED Off - Radio OFF; Solid LED On - Radio ON	

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. In Power Save Polling mode and on battery power.
4. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).
5. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsoft Windows XP. WLAN may also be compatible with certain third-party software supplicants. WLAN supplier IHV extensions required for Cisco Compatible Extensions support for Microsoft Windows Vista.

Broadcom BCM943228HM4L 802.11 a/b/g/n WiFi Adapter (2x2)

Wireless LAN Standards	IEEE 802.11a IEEE 802.11b IEEE 802.11g IEEE 802.11n
Interoperability	Wi-Fi certified Cisco Compatible Extensions Program compliant with Microsoft Windows 7, Windows Vista and XP (details at: http://www.hp.com/go/notebooks/WLAN)
Frequency Band	2.4 GHz and 5 GHz
Data Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: 6, 6.5, 9, 12, 13, 13.5, 18, 19.5, 24, 26, 27, 36, 39, 40.5, 48, 52, 54, 58.5, 65, 78, 81, 104, 108, 117, 121.5, 130, 135, 162, 216, 243, 270, 300 Mbps
Frequency Support	20 MHz: 2.4 GHz and 5 GHz bands 40 MHz: 2.4 GHz and 5 GHz bands
Modulation	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM
Security[1]	Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, LEAP, EAP-FAST. Support for Cisco Security Features (proven compatibility with Cisco Aironet infrastructure products through the Cisco Compatible Extensions Program Version 4) with Microsoft Windows Vista and XP only.
Sub-channels	Multinational support with frequency bands and channels compliant to local regulations.
Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)
Roaming	IEEE 802.11 compliant roaming between access points
Output Power (for CCK)2	17 dBm , nominal

Output Power (for OFDM; power varies by data rate)2	15 dBm , nominal	
Power Consumption	Idle associated: 250 mW Idle unassociated: 150 mW Transmit/Receive 20 MHz channel: 2.0 W (max) Transmit/Receive 40 MHz channel: 2.0 W (max)	
Power Management	ACPI compliant power management 802.11 compliant power saving mode	
Receiver Sensitivity[3]	270 Mbps: -61dBm, , 54 Mbps: -72 dBm, 11 Mbps: -85 dBm , 1 Mbps: -92 dBm	
Antenna Connections	High efficiency dual band antenna with spatial diversity, mounted in the display enclosure	
Form Factor	PCI-Express Half-MiniCard	
Weight	0.013 lb (6 g)	
Dimensions	0.19 x 1.06 x 1.18 in (4.75 x 26.8 x 30 mm)	
Operating Voltage	3.3v +/- 10%	
Temperature	Operating Non-operating	14° to 149° F (-10° to 65° C) -40° to 176° F (-40° to 80° C)
Humidity	Operating Non-operating	10% to 90% (non-condensing) 5% to 95% (non-condensing)
Altitude	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)
LED Activity	LED Off - Radio OFF; Solid LED On - Radio ON	

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CCK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).
4. WLAN supplier's client utility is required for Cisco Compatible Extensions support with Microsoft Windows XP. WLAN may also be compatible with certain third-party software supplicants. WLAN supplier IHV extensions required for Cisco Compatible Extensions support for Microsoft Windows Vista.

Atheros AR9485 802.11 b/g/n WiFi Adapter (1x1)	**Wireless LAN Standards**	IEEE 802.11b IEEE 802.11g IEEE 802.11n
	Interoperability	Wi-Fi certified
	Frequency Band	2.4 GHz
	Data Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: many possible data rates, ranging from 6 Mbps to 300 Mbps, depending on the combination of Bandwidth, Modulation Coding Scheme, and Guard Interval used, as defined in IEEE 802.11n specification
	Modulation	Direct Sequence Spread Spectrum DBPSK, DQPSK, CCK, OFDM, BPSK, QPSK, 16-QAM, 64-QAM
	Security[1]	Supports 64- and 128-bit WEP, WPA, WPA2, hardware-accelerated AES, 802.1x authentication types EAP-TLS, EAP-TTLS, PEAP-GTC, PEAP-MSCHAPv2, LEAP, EAP-FAST.

Technical Specifications

Sub-channels	Multinational support with frequency bands and channels compliant to local regulations.	
Media Access Protocol	CSMA/CA (Collision Avoidance) with ACK	
Network Architecture Models	Ad-hoc (Peer to Peer) Infrastructure (Access Point Required)	
Roaming	IEEE 802.11 compliant roaming between access points	
Output2	13.5 dBm, nominal	
Power Consumption	Transmit: 2.0 W (max) Receive: 1.6 W (max) Associated to Access Point, Idle: 250 mW nominal Wireless Button Off: 100 mW nominal Radio disabled: 75 mW nominal	
Power Management	ACPI compliant power management 802.11 compliant power saving mode	
Receiver Sensitivity[3]	72.2 Mbps: -70 dbm, 54 Mbps: -74 dBm, 11 Mbps: -88 dBm , 1 Mbps: -95 dBm	
Antenna Connections	High efficiency antenna with spatial diversity, mounted in the display enclosure	
Form Factor	PCI-Express Half-MiniCard 1.2	
Weight	0.013 lb (6 g)	
Dimensions	0.19 x 1.06 x 1.18 in (4.75 x 26.8 x 30 mm)	
Operating Voltage	3.3v +/- 9%	
Temperature	Operating Non-operating	14° to 158° F (-10° to 70° C) -40° to 176° F (-40° to 80° C)
Humidity	Operating Non-operating	10% to 90% (non-condensing) 5% to 95% (non-condensing)
Altitude	Operating Non-operating	0 to 10,000 ft (3,048 m) 0 to 50,000 ft (15,240 m)
LED Activity	LED Off - Radio OFF; Solid LED On - Radio ON	

1. Check latest software/driver release for updates on supported security features.
2. Maximum output power may vary by country according to local regulations.
3. Receiver sensitivity is measured at a packet error rate of 8% for 802.11b (CKK modulation) and a packet error rate of 10% for 802.11a/g (OFDM modulation).

HP Integrated Module with Bluetooth 4.0+EDR Wireless Technology

Bluetooth Specification	4.0+EDR Compliant
Dimensions	1.18 x 0.26 x 0.13 in (30 x 6.5 x 3.25 mm)
Frequency Band	2402 to 2480 MHz
Number of Available Channels	79 (1 MHz) available channels
Data Rates and Throughput	3 Mbps data rate; throughput up to 2.17 Mbps Synchronous Connection Oriented links up to 3, 64 kbps, voice channels Asynchronous Connection Less links 2178.1 kbps/177.1 kbps asymmetric or 1306.9 kbps symmetric
Transmit Power	-1.5 dBm to 4 dBm (Bluetooth Class II)

Technical Specifications

Receiver Sensitivity	Better than -20 dBM at 0.1 % raw bit error rate	
Power Consumption	Peak (Tx) 264 mW	
	Peak (Rx) 231 mW	
	Sleep <1 mW	
Antenna	Internally integrated within module	
Range	Up 33 ft (10 m)	
Electrical Interface	USB 2.0 compliant	
	Microsoft Windows Plug and Play compliant	
Bluetooth Software Supported	Broadcom Bluetooth for Windows	
	Microsoft Windows Bluetooth Software	
Link Topology	Point to Point, Multipoint Pico Nets up to 7 slaves	
Security	Full support of Bluetooth Security Provisions	
Power Management	Microsoft Windows ACPI, and USB Bus Support	
	Self configurable to optimize power conservation in all operating modes, including Standby, Hold, Park, and Sniff	
Certifications	All necessary regulatory approvals for supported countries, including:	
	FCC (47 CFR) Part 15C, Section 15.247 & 15.249	
	ETS 300 328, ETS 300 826	
	Low Voltage Directive IEC950	
	UL, CSA, and CE Mark	
Temperature	Operating	-14° to 158° F (-10° to 70° C)
	Non-operating	-40° to 212° F (-40° to 100° C)
Humidity	Operating	0% to 90%
	Non-operating	0% to 95%
Altitude	Operating	15,000 ft (4,572 m)
	Non-operating	40,000 ft (12,192 m)
Bluetooth Profiles Supported	Serial Port Profile (SPP)[1]	
	Service Discovery Application Profile (SDAP)	
	Dial-Up Networking (DUN)[1,2]	
	Generic Object Exchange Profile (GOEP)[1,2]	
	Object Push Profile (OPP)[1,2]	
	File Transfer Profile (FTP)	
	Synchronization Profile (SYNC)	
	Hard Copy Cable Replacement (HCRP)[1,2]	
	Personal Area Networking Profile (PAN)[1,2]	
	Human Interface Device Profile (HID)[1,2]	
	FAX Profile (FAX)	
	Basic Imaging Profile (BIP)[2]	
	Headset Profile (HSP)	
	Hands Free Profile (HFP)	
	Advanced Audio Distribution Profile (A2DP)	

1. indicates the profile is supported by Microsoft Windows XP SP2
2. indicates the profile is part of Windows Vista

AUDIO/MULTIMEDIA

Hardware	**Implementation**	IDT 92HD87 High Definition CODEC
	Function Key Volume Controls	Volume up, volume down, and mute
	Full Duplex	Yes
	Microphone In	Stereo
	Headphone/Line Out	Stereo
	Integrated Microphone	Yes, dual digital microphone array when equipped with optional webcam
Audio Output Quality	**Frequency Response**	20 Hz - 20 kHz
	Signal to Noise Ratio	>85 dB
	Total Harmonic Distortion	0.01%
	Noise Floor	-110 dB
	Play/Record Sampling Rate(s)	8 kHz - 48kHz
	DAC	16, 20 or 24-bit
	ADC	16 or 20-bit
Internal Stereo Speaker	**Power Rating**	2 Watts
	Impedance	4 ohms

POWER

Technical Specifications

HP 90W Smart AC Adapter (discrete configurations)	**Dimensions**	5.00 x 1.97 x 1.1 in (12.7 x 5.0 x 2.9 cm)	
	Weight	0.82 lb (370 g)	
	Input	100 to 240 VAC	
		Input Efficiency	87% min at 115 VAC
		Input frequency range	47 to 63 Hz
		Input AC current	1.5 A at 90 VAC, 0.75 A at 180 VAC PFC Version 2.4 A at 90 VAC, 1.2 A at 180 VAC NON PFC Version
	Output	**Output power**	90W
		DC output	19.0V
		Hold-up time	5 msec at 115 VAC input
		Output current limit	<11A, Over voltage protection- 29V max automatic shutdown
	Connector	3 pin/grounded, mates with interchangeable cords	
	Environmental Design	**Operating temperature**	32° to 104° F (0° to 40° C)
		Non-operating (storage) temperature	-4° to 149° F (-20° to 65° C)
		Altitude	0 to 10,000 ft (0 to 3,048 m)
		Humidity	20% to 80%
		Storage Humidity	10% to 90%
	EMI and Safety Certifications	CE Mark - full compliance with LVD and EMC directives; Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE; MTBF- over 200,000 hours at 25°C ambient condition.	

HP 65W Smart AC Adapter (UMA configurations)	**Dimensions**	4.17 x 1.85 x 1.1 in (10.6 x 4.7 x 2.8 cm)	
	Weight	0.62 lb (280 g)	
	Input	100 to 240 VAC	
		Input Efficiency	87% min at 115 VAC
		Input frequency range	47 to 63 Hz
		Input AC current	1.7 A at 90 VAC, 0.85 A at 180 VAC
	Output	**Output power**	65W
		DC output	18.5V
		Hold-up time	5 msec at 115 VAC input
		Output current limit	<11A, Over voltage protection- 29V max automatic shutdown
	Connector	3 pin/grounded, mates with interchangeable cords	
	Environmental Design	**Operating temperature**	32° to 104° F (0° to 40° C)
		Non-operating (storage) temperature	-4° to 149° F (-20° to 65° C)

		Altitude	0 to 10,000 ft (0 to 3,048 m)
		Humidity	20% to 80%
		Storage Humidity	10% to 90%
	EMI and Safety Certifications	CE Mark - full compliance with LVD and EMC directives; Worldwide safety standards - IEC60950, EN60950, UL60950, Class1, SELV; Agency approvals - C-UL-US, NORDICS, DENAN, EN55022 Class B, FCC Class B, CISPR22 Class B, CCC, NOM-1 NYCE; MTBF - over 200,000 hours at 25°C ambient condition.	

HP 9-cell (100 WHr) Lithium-Ion Primary battery	**Dimensions** (H x W x L)	0.8 x 2.4 x 8.1in (2 x 6.6 x 20.5cm)	
	Weight (max)	1.1lb, (.488kg)	
	Cells/Type	Lithium-Ion	
	Energy	**Voltage**	11.25V
		Amp-hour capacity	8.85Ah
		Watt-hour capacity	100Wh
	Temperature	**Operating (Charging)**	32° to 113° F (0° to 45° C)
		Operating (Discharging)	14° to 122° F(-10° to 50° C)
		Non-operating	-4° to 122° F (-20° to 50° C)
	Battery Re-Charge Time	**System in OFF or Standby Mode**	3.5 to 5 hours
		System ON	4 to 7 hours
	Fuel Gauge LED	No	
	Warranty	1 year	
	Compatible with optional Travel Battery	Yes	

HP 6-cell (55 WHr) Lithium-Ion Primary battery	**Dimensions** (H x W x L)	0.8 x 1.8 x 8.0in (2.0 x 4.7 x 20.5cm)	
	Weight (max)	.70lb, (.313kg)	
	Cells/Type	Lithium-Ion	
	Energy	**Voltage**	10.8V
		Amp-hour capacity	5.1Ah
		Watt-hour capacity	55Wh
	Temperature	**Operating (Charging)**	32° to 113° F (0° to 45° C)
		Operating (Discharging)	14° to 122° F(-10° to 50° C)
		Non-operating	-4° to 122° F (-20° to 50° C)
	Battery Re-Charge Time	**System in OFF or Standby Mode**	2.5 hours
		System ON	3 to 5 hours
	Fuel Gauge LED	No	
	Warranty	1 year	

	Compatible with optional Travel Battery	Yes	
HP 3-cell (31 WHr) Lithium-Ion Primary battery	**Dimensions** (H x W x L)	0.8 x 1.8 x 8.0in (2.0 x 4.7 x 20.5cm)	
	Weight (max)	0.47lb, (.210kg)	
	Cells/Type	Lithium-Ion	
	Energy	**Voltage**	11.1V
		Amp-hour capacity	2.8Ah
		Watt-hour capacity	31Wh
	Temperature	**Operating (Charging)**	32° to 113° F (0° to 45° C)
		Operating (Discharging)	14° to 122° F(-10° to 50° C)
		Non-operating	-4° to 122° F (-20° to 50° C)
	Battery Re-Charge Time	**System in OFF or Standby Mode**	2.5 hours
		System ON	3 to 5 hours
	Fuel Gauge LED	No	
	Warranty	1 year	
	Compatible with optional Travel Battery	Yes	
Optional HP BB09 Ultra Extended Life Notebook Battery (secondary battery)	**Dimensions** (H x W x L)	1.2 x 5.9 x 11.4 in (3x15x29cm)	
	Weight (max)	1.5lb, (.682kg)	
	Cells/Type	Lithium-Ion	
	Energy	**Voltage**	11.25V
		Amp-hour capacity	8.85Ah
		Watt-hour capacity	100Wh
	Temperature	**Operating (Charging)**	32° to 113° F (0° to 45° C)
		Operating (Discharging)	14° to 122° F(-10° to 50° C)
		Non-operating	-4° to 122° F (-20° to 50° C)
	Battery Re-Charge Time	**System in OFF or Standby Mode**	3.5 to 5 hours
		System ON	4 to 7 hours
	Fuel Gauge LED	Yes	
	Warranty	1 year	
	Compatible with optional Travel Battery	No	

Technical Specifications

Optional HP ST09 Extended Life Notebook Battery ("Travel Battery") (secondary battery)	**Dimensions** (H x W x L)	1.2 x 6.1 x 12 in (3x15.5x30.5cm)	
	Weight (max)	1.2lb, (.550kg)	
	Cells/Type	Lithium-Ion Polymer	
	Energy	**Voltage**	11.1V
		Amp-hour capacity	6.6Ah
		Watt-hour capacity	73Wh
	Temperature	**Operating (Charging)**	32° to 113° F (0° to 45° C)
		Operating (Discharging)	14° to 122° F(-10° to 50° C)
		Non-operating	-4° to 122° F (-20° to 50° C)
	Battery Re-Charge Time	**System in OFF or Standby Mode**	3.5 to 5 hours
		System ON	4 to 7 hours
	Fuel Gauge LED	Yes	
	Warranty	1 year	
	Compatible with optional Travel Battery	Yes	

Optional HP 6-cell (55 WHr) Long Life Primary Battery	**Dimensions** (H x W x L)	0.8 x 1.8 x 8.0in (2.0 x 4.7 x 20.5cm)	
	Weight (max)	.72lb, (.323kg)	
	Cells/Type	Lithium-Ion	
	Energy	**Voltage**	10.8V
		Amp-hour capacity	5.1Ah
		Watt-hour capacity	55Wh
	Temperature	**Operating (Charging)**	32° to 113° F (0° to 45° C)
		Operating (Discharging)	14° to 122° F(-10° to 50° C)
		Non-operating	-4° to 122° F (-20° to 50° C)
	Battery Re-Charge Time	**System in OFF or Standby Mode**	2.5 hours
		System ON	3 to 5 hours
	Fuel Gauge LED	No	
	Warranty	3 years	
	Compatible with optional Travel Battery	Yes	

ENVIRONMENTAL

HP ProBook 6470b Notebook PC

Environmental Data

Eco-Label Certifications

This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks:

US ENERGY STAR qualified (with Microsoft OS)
IT ECO declaration
EPEAT Gold with a Microsoft OS where HP registers commercial notebook products. See http://www.epeat.net for registration status in your country. US Federal Energy Management Program (FEMP)

System Configuration

The configuration used for the Energy Consumption and Declared Noise Emissions data is based on a "Typically Configured Notebook"

Energy Consumption	115 VAC	230 VAC	100 VAC
Normal Operation	8.6 W	9.27 W	8.32 W
Sleep (Energy Star low power mode)	0.6 W	0.7 W	0.6 W
Off	0.61 W	0.68 W	0.58 W

Heat Dissipation*	115 VAC	230 VAC	100 VAC
Normal Operation	29.4 BTU/hr	31.7 BTU/hr	28.4 BTU/hr
Sleep	2 BTU/hr	2.3 BTU/hr	2 BTU/hr
Off	2 BTU/hr	2.3 BTU/hr	2 BTU/hr

* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)

System Fan Off	Sound Power (LWAd, bels)	Sound Pressure (LpAm, decibels)
Idle	3	26
Fixed Disk (random writes)	3.4	26

System fan is usually off except when charging the battery

Batteries

This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:

- Mercury greater the 5ppm by weight
- Cadmium greater than 10ppm by weight

The battery type and chemistry used in the product is:

CR2032 (coin cell), Li-ion
6-cell high capacity Lithium-Ion battery (optional 8 cell available)

Additional

This product is in compliance with the Restrictions of Hazardous Substances

information

(RoHS) directive - 2002/95/EC.

This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.

This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).

This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see www.epeat.net

Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.

This product contains 0% post-consumer recycled plastic (by wt.)

This product is greater than 96.7% recycle-able when properly disposed of at end of life.

Packaging Materials

- External:
  - PAPER/Corrugated 335.7 g
- Internal:
  - PLASTIC/Polyethylene low density 13.8 g
  - PLASTIC/EPE-Expanded Polyethylene 68.1 g
  - PLASTIC/Polyester 6.5 g
- The PAPER/Corrugated packaging material is made from 80% recycled content.
- The PLASTIC/Polyethylene low density packaging material is made from 60% recycled content.
- The PLASTIC/EPE-Expanded Polyethylene packaging material is made from 60% recycled content.
- The PLASTIC/Polyester packaging material is made from 60% recycled content.

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

HP ProBook 6570b Notebook PC

Environmental Data

Eco-Label Certifications

This product has received or is in the process of being certified to the following approvals and may be labeled with one or more of these marks:

US ENERGY STAR qualified (with Microsoft OS)
IT ECO declaration
EPEAT Gold with a Microsoft OS where HP registers commercial notebook products. See http://www.epeat.net for registration status in your country. US Federal Energy Management Program (FEMP)

System Configuration

The configuration used for the Energy Consumption and Declared Noise Emissions data is based on a "Typically Configured Notebook"

Energy Consumption	115 VAC	230 VAC	100 VAC
Normal Operation	13.36 W	13.65 W	13.32 W
Sleep (Energy Star low power mode)	1.22 W	1.35 W	1.21 W
Off	0.685 W	0.800 W	0.677 W

Heat Dissipation*	115 VAC	230 VAC	100 VAC
Normal Operation	45.69 BTU/hr	46.68 BTU/hr	45.55 BTU/hr
Sleep	4.2 BTU/hr	4.6 BTU/hr	4.1 BTU/hr
Off	2.3 BTU/hr	2.7 BTU/hr	2.3 BTU/hr

* Heat dissipation is calculated based on the measured watts, assuming the service level is attained for one hour.

Declared Noise Emissions (in accordance with ISO 7779 and ISO 9296)

System Fan Off	Sound Power (LWAd, bels)	Sound Pressure (LpAm, decibels)
Idle	2.7	22
Fixed Disk (random writes)	3.3	27

System fan is usually off except when charging the battery

Batteries

This battery(s) in this product comply with EU Directive 2006/66/EC

Batteries used in the product do not contain:

- Mercury greater the 5ppm by weight
- Cadmium greater than 10ppm by weight

The battery type and chemistry used in the product is:

CR2032 (coin cell), Li-ion
6-cell high capacity Lithium-Ion battery (optional 8 cell available)

Additional

This product is in compliance with the Restrictions of Hazardous Substances

information

(RoHS) directive - 2002/95/EC.

This HP product is designed to comply with the Waste Electrical and Electronic Equipment (WEEE) Directive - 2002/96/EC.

This product is in compliance with California Proposition 65 (State of California; Safe Drinking Water and Toxic Enforcement Act of 1986).

This product is in compliance with the IEEE 1680 (EPEAT) standard at the Gold level, see www.epeat.net

Plastics parts weighing over 25 grams used in the product are marked per ISO 11469 and ISO1043.

This product contains 0% post-consumer recycled plastic (by wt.)

This product is greater than 95.5% recycle-able when properly disposed of at end of life.

Packaging Materials

- External:
  - PAPER/Corrugated 361 g
- Internal:
  - PLASTIC/Polyethylene low density 36 g
  - PLASTIC/Polypropylene 15 g
  - PLASTIC/EPE-Expanded Polyethylene 28 g
  - OTHER/OTHER 20
- The PAPER/Corrugated packaging material is made from 74% recycled content.
- The PLASTIC/Polyethylene low density packaging material is made from 21.9% recycled content
- The PLASTIC/PET packaging material is made from 21.9% recycled content
- The PLASTIC/EPE-Expanded Polyethylene packaging material is made from 21.9% recycled content
- The OTHER/OTHER packaging material is made from 21.9% recycled content

HP follows these guidelines to decrease the environmental impact of product packaging:

- Eliminate the use of heavy metals such as lead, chromium, mercury and cadmium in packaging materials.
- Eliminate the use of ozone-depleting substances (ODS) in packaging materials.
- Design packaging materials for ease of disassembly.
- Maximize the use of post-consumer recycled content materials in packaging materials.
- Use readily recyclable packaging materials such as paper and corrugated materials.
- Reduce size and weight of packages to improve transportation fuel

efficiency.
- Plastic packaging materials are marked according to ISO 11469 and DIN 6120 standards.

MATERIAL USAGE

This product does not contain any of the following substances in excess of regulatory limits (for reference of these limits please refer to the HP General Specification of the Environment (http://www.hp.com/hpinfo/globalcitizenship/environment/supplychain/gen_specifications.html):

- Asbestos
- Certain Azo Colorants
- Certain Brominated Flame Retardants – may not be used as flame retardants in plastics
- Cadmium
- Chlorinated Hydrocarbons
- Chlorinated Paraffins
- Formaldehyde
- Halogenated Diphenyl Methanes
- Lead carbonates and sulfates
- Lead and Lead compounds
- Mercuric Oxide Batteries
- Ozone Depleting Substances
- Polybrominated Biphenyls (PBBs)
- Polybrominated Biphenyl Ethers (PBBEs)
- Polybrominated Biphenyl Oxides (PBBOs)
- Polychlorinated Biphenyl (PCB)
- Polychlorinated Terphenyls (PCT)
- Polyvinyl Chloride (PVC) – except for wires and cables, and certain retail packaging has been voluntarily removed from most applications.
- Radioactive Substances
- Tributyl Tin (TBT), Triphenyl Tin (TPT), Tributyl Tin Oxide (TBTO)
- Nickel finishes that release greater than 0.5 µgrams/cm^2/week, measured according to EN 1811:1998, are not used on any product surface designed to be frequently handled or touched by users.

END-OF-LIFE MANAGEMENT AND RECYCLING

Hewlett-Packard offers end-of-life HP product return and recycling programs in many geographic areas. To recycle your product, please go to: http://www.hp.com/go/reuse-recycle or contact your nearest HP sales office. Products returned to HP will be recycled, recovered or disposed of in a responsible manner.

The EU WEEE directive (2002/95/EC) requires manufacturers to provide treatment information for each product type for use by treatment facilities. This information (product disassembly instructions) is posted on the Hewlett Packard web site at: http://www.hp.com/go/recyclers. These instructions may be used by recyclers and other WEEE treatment facilities as well as HP OEM customers who integrate and re-sell HP equipment.

HEWLETT-PACKARD CORPORATE ENVIRONMENTAL INFORMATION

For more information about HP's commitment to the environment:

Global Citizenship Report
http://www.hp.com/hpinfo/globalcitizenship/gcreport/index.html

Technical Specifications

Environment website
http://www.hp.com/environment
Eco-label certifications
http://www.hp.com/hpinfo/globalcitizenship/environment/productdesign/ecolabels.html
ISO 14001 certificates:
http://www.hp.com/hpinfo/globalcitizenship/environment/operations/envmanagement.html

Options and Accessories (sold separately and availability may vary by country)

Type	Description	Part #
Memory	HP 2 GB PC3-12800 (DDR3 1600 MHz) SODIMM	H2P63AA#xxx
	HP 4 GB PC3-12800 (DDR3 1600 MHz) SODIMM	H2P64AA#xxx
	HP 8 GB PC3-12800 (DDR3 1600 MHz) SODIMM	H2P65AA#xxx
	NOTE: Full availability of 4 GB or more of memory requires Windows Vista Business 64-bit or Linux. With Windows 32-bit operating systems, the amount of usable memory is dependent upon your configuration, so that above 3 GB all memory may not be available due to system resource requirements.	
Cases	HP Deluxe 4 Wheel Roller	XW576AA
Docking	HP Display and Notebook Stand	AW662AA
	HP Dual Hinge Notebook Stand	AW661AA
	HP Adjustable Dual Display Stand	AW664AA
	HP 90W Docking Station	A7E32AA#xxx
	HP 120W Advanced Docking Station	A7E36AA#xxx
Input/Output - Mice	HP Wireless Mobile Mouse	H2L63AA
Adapters	HP 90W Slim Adapter	BT796AA#xxx
Storage - External Storage	HP Mobile USB DVDRW	A2U57AA
	SATA Upgrade Bay 500 GB 7200 rpm Hard Drive	LX733AA
Batteries	HP CC06XL Long Life Notebook Battery	QK642AA
	HP CC09 Notebook Battery	QK643AA
	HP ST09 Extended Life Notebook Battery	QK639AA
	HP BB09 Ultra Extended Life Notebook Battery	QK640AA
Health and Education	HP 20-Notebook Managed Charging Cart	QL489AA
	HP 20-Notebook Charging Cart	QL488AA
	HP 30-Notebook Managed Charging Cart	QL490AA
	HP Pocket Whiteboard	A0X37AA
Security	HP Keyed Cable Lock	BV411AA
	HP Docking Station Cable Lock	AU656AA

Options and Accessories (sold separately and availability may vary by country)

Copyright © 2013 Hewlett-Packard Development Company, L.P.

All rights reserved. All trademarks are the property of their respective owners. Intel, Core, Celeron, and vPro are registered trademarks or trademarks of Intel Corporation in the U.S. and/or other countries. Adobe is a trademark of Adobe Systems Incorporated. Bluetooth is a registered trademark of Bluetooth SIG, Inc., in the U.S. and other countries. All other product names mentioned herein may be trademarks of their respective companies.

The information contained herein is subject to change without notice and is provided "as is" without warranty of any kind. The warranties for HP products are set forth in the express limited warranty statements accompanying such products. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.